



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/448,374 | 11/23/1999 | STEVEN DARDINSKI | 102314-46 | 4969 |

21125 7590 07/03/2003

NUTTER MCCLENNEN & FISH LLP
WORLD TRADE CENTER WEST
155 SEAPORT BOULEVARD
BOSTON, MA 02210-2604

EXAMINER

INGBERG, TODD D

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2124

DATE MAILED: 07/03/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/448,374

Applicant(s)

DARDINSKI ET AL.

Examiner

Todd Ingberg

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41, 43-76 and 78 is/are pending in the application.
- 4a) Of the above claim(s) 42, 77 and 79-98 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-41, 43-76 and 78 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 2124

DETAILED ACTION

Claims 1 - 41, 43-76 and 78 have been elected and examined.

Claims 42, 77, 79-98 have been canceled as part of Restriction practice.

Information Disclosure Statement

1. The Applicant has submitted a large IDS. On initial inspection the Examiner did not see the relevance of the documents. If the Applicant feels particular documents are relevant to the invention the specific documents should be indicated.

Priority

2. Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged.

Case 60/134,597 has been ordered and the decision on granting domestic priority with a date of 4/6/2000 will be determined. The claim to a foreign priority of P11-01503 with a date of 1/21/1999 is also under review.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 - 41, 43-76 and 78 are rejected under 35 U.S.C. 102(b) as being anticipated by

ControlShell User's Manual version 5.1 from Real-Time Innovations, Inc. published June 1996.

(Referred to as **CS** for ControlShell). ControlShell uses the object oriented programming

language C++.

Art Unit: 2124

Claim 1

ControlShell version 5.1 anticipates an apparatus for configuring a control system (CS, page 1-1, Introduction covers the use of the tool), the apparatus comprising: a plurality of objects (CS, page 4-2, shows an inheritance diagram with objects such as “YourComponent”, etc) , each of which represents an entity CS, page 4-2, a component is an entity), each object being associated with one or more parameters (CS, page 4-2, shows an inheritance diagram with objects) , each parameter pertaining to a characteristic of the entity represented by the object (CS, page 3-35 to 3-36, the actual screens for building components) , at least one object ("descendant" object) being defined as a descendant of another object ("ancestor" object) (CS, page 4-2, shows an inheritance diagram with objects) and being associated with one or more parameters of the ancestor object (Interpreted two ways - Inheritance of the attributes and methods OR the inheritance lines in the figure), a change during configuration to a parameter of an ancestor object being effective as to a descendant object with which that parameter is associated (CS, page 4-2, shows an inheritance diagram with objects).

Interpretation - The Applicant seems to be using the term “parameter” to mean to different things. On one hand the applicant seems to be referring to the attributes of an object and in another sense the inheritance link can be the interpretation of the term. Assuming the Applicant is being consistent the inheritance of methods and attributes from parent to child class in the inheritance model meets the limitations.

Art Unit: 2124

Claim 2

Apparatus according to claim 1, including an editor that facilitates definition, during configuration, of an association between an parameter and an object. (CS, page 3-34 to 3-37, note the bottom of 3-36 shows completion of parameter specification).

Claim 3

Apparatus according to claim 2, including functionality that facilitates definition (CS, page 3-36, Methods shown are built in execute ... etc), during configuration, of an object as a descendant of another object (CS, page 4-2, shows an inheritance diagram with objects).

Claim 4

Apparatus according to claim 2, wherein each parameter has one or more attributes, and wherein the apparatus has an editor that facilitates definition, during configuration, of a value of an attribute (CS, page 5-11. Editing parameter).

Claim 5

Apparatus according to claim 1, wherein an object represents an entity within any of (i) a controlled system (CS, page 7-3, note components (entities) in figure 7.1), (ii) the control system (CS, page 7-3, note components (entities) in figure 7.1), (iii) a control level hierarchy (CS, page 7-3, note components (entities) in figure 7.1 and in view of the figure page 4-2 for each component), and (iv) the apparatus for configuring the control system (CS, ControlShell - the use of this product as per page 1-1).

Art Unit: 2124

Claim 6

Apparatus according to claim 5, wherein an entity includes any of a field device, control processor, block, loop, compound, historian, object type category, object connection, parameter connection, display placeholder, graphical display entity, and report. (CS, page 1-4, Stethoscope CsdBase connection and Chapter 8).

Claim 7

Apparatus according to claim 1, wherein each parameter has one or more attributes, and wherein the attributes of a parameter define any of the following with the respect to the characteristic to which the parameter pertains: name, grouping, display label, data type, behavior, help information, edit type, data value range, data value, formula definition, and display format (CS, pages 5-10 to 5-14 Help information being comments).

Claim 8

Apparatus according to claim 1, wherein a change during configuration to a parameter of an ancestor object is effective as to a descendant object with which that parameter is associated, regardless of whether that change is made before or after the descendant is any of defined and created. (CS, page 4-2, shows an inheritance diagram with objects - Interpreted to be the principle of inheritance and the link made with page 3-36 Base Class Name link. Also, could read on an object outside the inheritance structure with all attributes/methods designated as PUBLIC access).

Art Unit: 2124

Claim 9

ControlShell version 5.1 anticipates an apparatus for configuring a control system, the apparatus comprising: a plurality of objects, each object being associated with one or more parameters, each parameter pertaining to a characteristic of an entity represented by the object, at least one object ("descendant" object) being defined as a descendant of another object ("ancestor" object) and as being associated with the parameters of the ancestor object, a change during configuration to a parameter of an ancestor object being effective as to a descendant object with which that parameter is associated. The limitations of claim 9 are taught in claim 1.

Claim 10

Apparatus according to claim 9, wherein a descendant object is associated with the parameters of the ancestor object from which it descends, and is associated with further parameters as consequence one or more parameters definitions contained in, or associated with, the descendant object. The limitations are taught by the principle of inheritance in claim 1.

Claim 17

Apparatus according to any of claims 9 and 11, wherein an entity includes any of a field device, control processor, block, loop, compound, historian, object type category, object connection, parameter connection, display placeholder, graphical display entity, and report. As taught in claim 5.

Art Unit: 2124

Claim 18

Apparatus according to claim 17, wherein each parameter has one or more attributes defining any of the following with the respect to the characteristic to which the parameter pertains: name, grouping, display label, data type, behavior, help information, edit type, data value range, data value, formula definition, and display format. (CS, pages 5-10 to 5-14 with Help being interpreted as comments).

Claim 11

ControlShell version 5.1 anticipates an apparatus for configuring a control system, the apparatus comprising: a plurality of objects, each object being associated with one or more parameters, each parameter pertaining to a characteristic of an entity represented by the object (as taught in claim 1), wherein an object represents an entity within any of (i) a controlled system, (ii) the control system, (iii) a control level hierarchy, and (iv) the apparatus for configuring the control system (as taught in claim 5), at least one object being associated with a parameter as a consequence of any of a parameter definition, parameter override and parameter modification contained or associated with the object, at least one object being a descendant of another object ("ancestor" object) and being associated with one or more parameters with which the ancestor object is associated, a parameter with which an object is associated as a consequence of any of a parameter definition, parameter override and parameter modification takes precedence over a parameter with which an object is associated as a consequence of being defined as a descendant of another object. (CS, page 4-2, shows an inheritance diagram with objects - Interpreted to be the

Art Unit: 2124

principle of inheritance and the link made with page 3-36 Base Class Name link. Also, could read on an object outside the inheritance structure with all attributes/methods designated as PUBLIC access).

Claim 12

Apparatus according to claim 11, wherein a change during configuration to a parameter of an ancestor object is effective as to a descendant object with which that parameter is associated, except insofar as that parameter is associated with the descendant object as a consequence of any of a parameter definition, parameter override and parameter modification. As per claim 1 with inheritance and PUBLIC as per claim 11).

Claim 13

Apparatus according to claim 12, comprising a second object that is defined as a descendant of a first object, and a third object defined as a descendant of the second object. (CS, page 4-2, shows an inheritance diagram with objects - Interpreted to be the principle of inheritance and the link made with page 3-36 Base Class Name link).

Claim 14

Apparatus according to claim 13, wherein a parameter associated with the second object as a consequence of any of a parameter definition, parameter override and parameter modification takes precedence as to the second and third objects over a corresponding parameter associated with the first object. (CS, page 4-2, shows an inheritance diagram with objects - Interpreted to be the principle of inheritance and the link made with page 3-36 Base Class Name link).

Art Unit: 2124

Claim 15

Apparatus accord to claim 13, wherein a parameter associated with the second object as a consequence of any of a parameter definition, parameter override and parameter modification is associated with the third object as a consequence of descendancy, regardless of whether a corresponding parameter is associated with the first object. (CS, page 4-2, shows an inheritance diagram with objects - Interpreted to be the principle of inheritance and the link made with page 3-36 Base Class Name link. Also, could read on an object outside the inheritance structure with all attributes/methods designated as PUBLIC access).

Claim 16

Apparatus according to claim 11, wherein at least one object ("modified" object) is associated with another object ("modifier" object) for purposes of parameter modification, and wherein the modified object associated with one or more parameters of the modifier object. Interpreted as normal use of object technology and getter and setter methods where parameters(attributes) are retrieved/changed.

Claim 17

Apparatus according to any of claims 9 and 11, wherein an entity includes any of a field device, control processor, block, loop, compound, historian, object type category, object connection, parameter connection, display placeholder, graphical display entity, and report. As taught in claim 5.

Art Unit: 2124

Claim 18

Apparatus according to claim 17, wherein each parameter has one or more attributes defining any of the following with the respect to the characteristic to which the parameter pertains: name, grouping, display label, data type, behavior, help information, edit type, data value range, data value, formula definition, and display format. (CS, pages 5-10 to 5-14 with Help being interpreted as comments).

Claim 19

ControlShell version 5.1 anticipates an apparatus for configuring a control system, the apparatus comprising: a plurality of objects, each object being associated with one or more parameters, each parameter pertaining to a characteristic of an entity represented by the object, at least one object ("descendant" object) being defined as a descendant of another object ("ancestor" object) and as being associated with one or more parameters of the ancestor object (as per claim 1), a change during configuration to a parameter of an ancestor object being effective as to a descendant object with which that parameter is associated, at least one object being associated with one or more parameter groups, each of which defines a grouping for one or more parameters associated with that object (CS, grouping in categories and module page 7-32 to 7-34).

Claim 20

Apparatus according to claim 19, wherein a parameter group defines a grouping with which one or more parameters are presented for any of editing and reporting (CS, pages 5-10 to 5-14).

Art Unit: 2124

Claim 21

Apparatus according to claim 20, wherein, as a consequence of descendancy, a descendant object is associated with the parameter groups of the ancestor object from which it descends. As per claim 1.

Claim 22

ControlShell version 5.1 anticipates a method for configuring a control system, the method comprising the steps of: representing entities with objects, each object being associated with one or more parameters, each parameter pertaining to a characteristic of the entity represented by the object, defining at least one object ("descendant" object) as a descendant of another object ("ancestor" object), associating a descendant object with one or more parameters of the ancestor object from which that descendant object descends, and making effective as to that descendant object a change, during configuration, to a parameter of that ancestor object. As per claim 1.

Claim 23

A method according to claim 22, including the step of defining, during configuration, an association between an parameter and an object. As per claim 1.

Claim 24

A method according to claim 23, including the step of defining, during configuration, an object as a descendant of another object. As per claim 1.

Art Unit: 2124

Claim 25

A method according to claim 23, wherein each parameter has one or more attributes, and wherein the method includes the step of defining, during configuration (CS, pages 3-34 to 3-36 and the principle of inheritance on instantiation), a value of an attribute (CS, page 5-26, constructor).

Claim 26

A method according to claim 22, wherein an object represents an entity within any of (i) a controlled system, (ii) the control system, (iii) a control level hierarchy, and. (iv) the apparatus for configuring the control system. As per claim 5.

Claim 27

A method according to claim 26, wherein an entity includes any of a field device, control processor, block, loop, compound, historian, object type category, object connection, parameter connection, display placeholder, graphical display entity, and report. As per claim 6.

Claim 28

A method according to claim 22, wherein each parameter has one or more attributes, and wherein the attributes of a parameter define any of the following with the respect to the characteristic to which the parameter pertains: name, grouping, display label, data type, behavior, help information, edit type, data value range, data value, formula definition, and display format. As per claim 7.

Claim 29

A method according to claim 22, including the step of making effective as to a descendant object a change, during configuration, to a parameter of the ancestor object from which the descendant

Art Unit: 2124

object descends, regardless of whether that change is made before or after the descendant is any of defined and created. As per claim 8.

Claim 30

ControlShell version 5.1 anticipates a method for configuring a control system, the method comprising the steps of: representing entities with objects, each object being associated with one or more parameters, each parameter pertaining to a characteristic of an entity represented by the object, defining at least one object ("descendant" object) as a descendant of another object ("ancestor" object), associating a descendant object with the parameters of the ancestor object from which that descendant object descends, and making effective as to that descendant object a change, during configuration, to a parameter of that ancestor object. As per claim 1.

Claim 31

A method according to claim 30, comprising the step of associating -a descendant object with parameters in addition to those of the ancestor object from which it descends. As per claim 1.

Claim 32

ControlShell version 5.1 anticipates a method for configuring a control system, the method comprising the steps of representing entities with a plurality of objects, associating each object with one or more parameters as a consequence of any of a parameter definition, parameter override and parameter modification contained or associated with the object As per claim 1, each parameter pertaining to a characteristic of an entity represented by the object, wherein an entity models an entity within any of (i) a controlled system, (ii) the control system, (iii) a control level

Art Unit: 2124

hierarchy, and (iv) the apparatus for configuring the control system (as per claim 5), defining at least one object as a descendant of another object ("ancestor" object), associating a descendant object with one or more parameters with which the ancestor object is associated, and making effective as to that descendant object a change, during configuration, to a parameter of that ancestor object, except as to a parameter with which the descendant object is associated as a consequence of any of a parameter definition, parameter override and parameter modifications per claim 1 Overriding is part of the principle of polymorphism in object oriented technology and inheritance influences which methods are called by default and which need to be explicitly identified by class).

Claim 33

A method according to claim 32, comprising the steps of defining a second object as a descendant of a first object, and defining a third object as a descendant of -the second object. As per claim 1.

Claim 34

A method according to claim 33, comprising the step of associating the second and third objects with one or more parameters of the first object (as per claim 13), except as to a parameter associated with the second object as a consequence of any of a parameter definition, parameter override and parameter modification. Inheritance as per claim 1.

Claim 35

A method accord to claim 33, associating the third object with a parameter associated with the second object as a consequence of any of a parameter definition, parameter override and

Art Unit: 2124

parameter modification, regardless of whether a corresponding parameter is associated with the first object. As per claim 1.

Claim 37

A method according to any of claims 30 and 33, wherein an entity includes any of a field device, control processor, block, loop, compound, historian, object type category, object connection, parameter connection, display placeholder, graphical display entity, and report. As per claim 6.

Claim 36

A method according to claim 32, comprising the steps of defining at least one object ("modified" object) as being associated with another object ("modifier" object) for purposes of parameter modification, associating a modified object with one or more parameters of the associated modifier object, and making effective as to that modified object a change, during configuration, to a parameter of that modifier object. As per claim 16.

Claim 37

A method according to any of claims 30 and 33, wherein an entity includes any of a field device, control processor, block, loop, compound, historian, object type category, object connection, parameter connection, display placeholder, graphical display entity, and report. As per claim 17.

Claim 38

A method according to claim 37, wherein each parameter has one or more attributes defining any of the following with the respect to the characteristic to which the parameter pertains: name,

Art Unit: 2124

grouping, display label, data type, behavior, help information, edit type, data value range, data value, formula definition, and display format. As per claim 18.

Claim 39

ControlShell version 5.1 anticipates a method for configuring a control system, the method comprising the steps of: representing entities with objects, each object being associated with one or more parameters, each parameter pertaining to a characteristic of an entity represented by the object, defining at least one object ("descendant" object) being defined as a descendant of another object ("ancestor" object), associating a descendant object with one or more parameters of the ancestor object from which that descendant object descends, and making effective as to that descendant object a change, during configuration, to a parameter of that ancestor object, associating at least one object with one or more parameter groups, each of which defines a grouping for one or more parameters associated with that object. As per claim 1.

Claim 40

A method according to claim 39, comprising the step of presenting one or more parameters of an object during any of editing and reporting as a function of a parameter group associated with that object. As per claim 20.

Claim 41

A method according to claim 39, comprising associating a descendant object with the ancestor object from which that descendant object descends. As per claim 1.

Art Unit: 2124

Claim 43

ControlShell version 5.1 anticipates a method for configuring a control system, the method comprising the steps of: representing entities with objects, each object being associated with one or more parameters, each parameter pertaining to a characteristic of the entity represented by the object, defining at least one object ("descendant" object) as a descendant of another object ("ancestor" object), associating a descendant object with one or more parameters of the ancestor object from which that descendant object descends, and making effective as to that descendant object a change, during configuration, to a parameter of that ancestor object, configuring the control system in accord with one or more of the objects. As per claim 1.

Claim 44

ControlShell version 5.1 anticipates a apparatus for configuring a process control system, the apparatus comprising: a plurality of objects, each of which represents an entity selected from the group of entities including a block, block definition, modifier block, modifier block definition, block collection, composite block definition, I/O block, loop template, simple loop, and template derived loop (CS, Chapter 8), each object being associated with one or more parameters, each parameter pertaining to a characteristic of the entity represented by the object, at least one object ("descendant" object) being defined as a descendant of another object ("ancestor" object) and being associated with one or more parameters of the ancestor object, a change during configuration to a parameter of an ancestor object being effective as to a descendant object with which that parameter is associated. As per claim 1.

Art Unit: 2124

Claim 45

Apparatus according to claim 44, wherein each parameter has one or more attributes, and wherein the attributes of a parameter define any of the following with the respect to the characteristic to which the parameter pertains: name, grouping, display label, data type, behavior, help information, edit type, data value range, data value, formula definition, and display format. As per claim 7.

Claim 46

ControlShell version 5.1 anticipates an apparatus for configuring a process control system, the apparatus comprising: a plurality of objects (as per claim 1), each of which represents an entity selected from the group of entities including (see Chapter 8 for the components in a FSM) a block, block definition, modifier block, modifier block definition, block collection, composite block definition, I/O block, loop template, simple loop, and templatederived loop, each object being associated with one or more parameters (as per claim 1), each parameter pertaining to a characteristic of an entity represented by the object (as per claim 1), at least one object ("descendant" object) being defined as a descendant of another object ("ancestor" object) and as being associated with the parameters of the ancestor object (as per claim 1), a change during configuration to a parameter of an ancestor object being effective as to a descendant object with which that parameter is associated (as per claim 1).

Claim 47

Apparatus according to claim 46, wherein a descendant object is associated with the parameters of the ancestor object from which it descends, and is associated with further parameters as

Art Unit: 2124

consequence one or more parameters definitions contained in, or associated with, the descendant object. As per claim 1.

Claim 48

ControlShell version 5.1 anticipates an apparatus for configuring a process control system, the apparatus comprising: a plurality of objects (as per claim 1), each of which represents an entity selected from the group of entities (see Chapter 8 for components of FSM) including a block, block definition, modifier block, modifier block definition, block collection, composite block definition, I/O block, loop template, simple loop, and templatederived loop, each object being associated with one or more parameters, each parameter pertaining to a characteristic of an entity represented by the object (as per claim 1), wherein an object represents an entity within any of (i) the controlled process, (ii) the control system, (iii) a control level hierarchy, and (iv) the apparatus for configuring the control system (as per claim 5), at least one object being associated with a parameter as a consequence of any of a parameter definition, parameter override and parameter modification contained or associated with the object (as per claim 10), at least one object being a descendant of another object ("ancestor" object) and being associated with one or more parameters with which the ancestor object is associated (as per claim 1), a parameter with which an object is associated as a consequence of any of a parameter definition, parameter override and parameter modification takes precedence over a parameter with which an object is associated as a consequence of being defined as a descendant of another object (as per claim 12).

Art Unit: 2124

Claim 49

Apparatus according to claim 48, wherein a change during configuration to a parameter of an ancestor object is effective as to a descendant object with which that parameter is associated (as per claim 1), except insofar as that parameter is associated with the descendant object as a consequence of any of a parameter definition, parameter override and parameter modification (as per claim 1).

Claim 50

Apparatus according to claim 49, comprising a second object that is defined as a descendant of a first object, and a third object defined as a descendant of the second object (as per claim 1).

Claim 51

Apparatus according to claim 50, wherein a parameter associated with the second object as a consequence of any of a parameter definition, parameter override and parameter modification takes precedence as to the second and third objects over a corresponding parameter associated with the first object. As per claim 1.

Claim 52

Apparatus accord to claim 50, wherein a parameter associated with the second object as a consequence of any of a parameter definition, parameter override and parameter modification is associated with the third object as a consequence of decendancy, regardless of whether a corresponding parameter is associated with the first object. As per claim 1.

Claim 52

Art Unit: 2124

Apparatus according to claim 48, wherein at least one object ("modified" object) is associated with another object ("modifier" object) for purposes of parameter modification, and wherein the modified object associated with one or more parameters of the modifier object. As per claim 12.

Claim 54

Apparatus according to claim 48, wherein each parameter has one or more attributes defining any of the following with the respect to the characteristic to which the parameter pertains: name, grouping, display label, data type, behavior, help information, edit type, data value range, data value, formula definition, and display format. (CS, Chapter 5 - component editor)

Claim 55

ControlShell version 5.1 anticipates an apparatus for configuring a process control system, the apparatus comprising: a plurality of objects, each of which represents an entity selected from the group of entities including a block, block definition, modifier block, modifier block definition, block collection, composite block definition, I/O block, loop template, simple loop, and templatederived loop, each object being associated with one or more parameters, each parameter pertaining to a characteristic of an entity represented by the object, at least one object ("descendant" object) being defined as a descendant of another object ("ancestor" object) and as being associated with one or more parameters of the ancestor object, a change during configuration to a parameter of an ancestor object being effective as to a descendant object with which that parameter is associated, at least one object being associated with one or more

Art Unit: 2124

parameter groups, each of which defines a grouping for one or more parameters associated with that object. As per claim 46.

Claim 56

Apparatus according to claim 55, wherein a parameter group defines a grouping with which one or more parameters are presented for any of editing and reporting. As per claim 20.

Claim 57

Apparatus according to claim 56, wherein, as a consequence of descendancy, a descendant object is associated with the parameter groups of the ancestor object from which it descends. As per claim 19.

Claim 58

ControlShell version 5.1 anticipates a method for configuring a process control system, the method comprising the steps of: representing entities with objects, each of which represents an entity selected from the group of entities including a block, block definition, modifier block, modifier block definition, block collection, composite block definition, I/O block, loop template, simple loop, and template-derived loop, each object being associated with one or more parameters, each parameter pertaining to a characteristic of the entity represented by the object, defining at least one object ("descendant" object) as a descendant of another object ("ancestor" object), associating a descendant object with one or more parameters of the ancestor object from which that descendant object descends, and making effective as to that descendant object a change, during configuration, to a parameter of that ancestor object. As per claim 46.

Art Unit: 2124

Claim 59

A method according to claim 58, including the step of defining, during configuration, an association between an parameter and an object. As per claim 1.

Claim 60

A method according to claim 59, including the step of defining, during configuration, an object as a descendant of another object. As per claim 1.

Claim 61

A method according to claim 59, wherein each parameter has one or more attributes, and wherein the method includes the step of defining, during configuration, a value of an attribute. As per claim 4.

Claim 62

A method according to claim 58, wherein an object represents an entity within any of (i) the control system, (ii) a control level hierarchy, and (iii) the apparatus for configuring the control system. As per claim 5.

Claim 63

A method according to claim 58, wherein each parameter has one or more attributes, and wherein the attributes of a parameter define any of the following with the respect to the characteristic to which the parameter pertains: name, grouping, display label, data type, behavior, help information, edit type, data value range, data value, formula definition, and display format. As per claim 7.

Claim 64

Art Unit: 2124

A method according to claim 58, including the step of making effective as to a descendant object a change, during configuration, to a parameter of the ancestor object from which the descendant object descends, regardless of whether that change is made before or after the descendant is any of defined and created. As per claim 8.

Claim 65

ControlShell version 5.1 anticipates a method for configuring a process control system, the method comprising the steps of: representing entities with objects (as per claim 1), each entity including any of a (see chapter 8 for implementation of FSM) block, block definition, modifier block, modifier block definition, block collection, composite block definition, I/O block, loop template, simple loop, and template-derived loop, each object being associated with one or more parameters, each parameter pertaining to a characteristic of an entity represented by the object, defining at least one object ("descendant" object) as a descendant of another object ("ancestor" object), associating a descendant object with the parameters of the ancestor object from which that descendant object descends, and making effective as to that descendant object a change, during configuration, to a parameter of that ancestor object (As per claim 1).

Claim 66

A method according to claim 65, comprising the step of associating a descendant object with parameters in addition to those of the ancestor object from which it descends. As per claim 1.

Claim 67

Art Unit: 2124

ControlShell version 5.1 anticipates a method for configuring a process control system, the method comprising the steps of: representing entities with objects, the entities including any of a block, block definition, modifier block, modifier block definition, block collection, composite block definition, I/O block, loop template, simple loop, and template-derived loop, associating each object with one or more parameters as a consequence of any of a parameter definition, parameter override and parameter modification contained or associated with the object, each parameter pertaining to a characteristic of an entity represented by the object, wherein an entity models an entity within any of (i) the control system, (ii) a control level hierarchy, and (iii) the apparatus for configuring the control system defining at least one object as a descendant of another object ("ancestor" object), associating a descendant object with one or more parameters with which the ancestor object is associated, and making effective as to that descendant object a change, during configuration, to a parameter of that ancestor object (as per claim 46), except as to a parameter with which the descendant object is associated as a consequence of any of a parameter definition, parameter override and parameter modification (as per claim 11).

Claim 68

A method according to claim 67, comprising the steps of defining a second object as a descendant of a first object, and defining a third object as a descendant of the second object. As per claim 1.

Claim 69

A method according to claim 68, comprising the step of associating the second and third objects with one or more parameters of the first object, except as to a parameter associated with the

Art Unit: 2124

second object as a consequence of any of a parameter definition, parameter override and parameter modification. As per claim 11.

Claim 70

A method accord to claim 68, associating the third object with a parameter associated with the second object as a consequence of any of a parameter definition, parameter override and parameter modification, regardless of whether a corresponding parameter is associated with the first object. As per claim 11.

Claim 71

A method according to claim 67, comprising the steps of defining at least one object ("modified" object) as being associated with another object ("modifier" object) for purposes of parameter modification, associating a modified object with one or more parameters of the associated modifier object, and making effective as to that modified object a change, during configuration, to a parameter of that modifier object. As per claim 16.

Claim 72

A method according to claim 71, wherein each parameter has one or more attributes defining any of the following with the respect to the characteristic to which the parameter pertains: name, grouping, display label, data type, behavior, help information, edit type, data value range, data value, formula definition, and display format. As per claim 7.

Claim 73

Art Unit: 2124

ControlShell version 5.1 anticipates a method for configuring a process control system, the method comprising the steps of: representing entities with objects, the entities including any of a block, block definition, modifier block, modifier block definition, block collection, composite block definition, I/O block, loop template, simple loop, and template-derived loop, each object being associated with one or more parameters, each parameter pertaining to a characteristic of an entity represented by the object, defining at least one object ("descendant" object) being defined as a descendant of another object ("ancestor" object), associating a descendant object with one or more parameters of the ancestor object from which that descendant object descends, and making effective as to that descendant object a change, during configuration, to a parameter of that ancestor object, associating at least one object with one or more parameter groups, each of which defines a grouping for one or more parameters associated with that object. As per claim 46.

Claim 75

A method according to any of claims 73 and 74, comprising the step of presenting one or more parameters of an object during any of editing and reporting as a function of a parameter group associated with that object. As per claim 19.

Claim 76

A method according to any of claims 73 and 74, comprising associating a descendant object with the ancestor object from which that descendant object descends. As per claim 1.

Claim 74

Art Unit: 2124

ControlShell version 5.1 anticipates a method for configuring a process control system, the method comprising the steps of: representing entities with objects (as per claim 1), the entities including any of a (See Chapter 8 for defining a FSM) block, block definition, modifier block, modifier block definition, block collection, composite block definition, I/O block, loop template, simple loop, and template-derived loop, each object being associated with one or more parameters, each parameter pertaining to a characteristic of an entity represented by the object (as per claim 1), defining at least one object ("descendant" object) being defined as a descendant of another object ("ancestor" object), associating a descendant object with one or more parameters of the ancestor object from which that descendant object descends (as per claim 1), changing, during configuration, a parameter of that ancestor object, the change being effective as to a descendant object with which that parameter is associated, associating at least one object with one or more parameter groups, each of which defines a grouping for one or more parameters associated with that object As per claim 19.

Claim 75

A method according to any of claims 73 and 74, comprising the step of presenting one or more parameters of an object during any of editing and reporting as a function of a parameter group associated with that object. As per claim 19.

Claim 76

A method according to any of claims 73 and 74, comprising associating a descendant object with the ancestor object from which that descendant object descends. As per claim 1.

Art Unit: 2124

Claim 78

ControlShell version 5.1 anticipates a method for configuring a process control system, the method comprising the steps of: representing entities with objects, the entities including any of a block, block definition, modifier block, modifier block definition, block collection, composite block definition, I/O block, loop template, simple loop, and template-derived loop, each object being associated with one or more parameters, each parameter pertaining to a characteristic of the entity represented by the object, defining at least one object ("descendant" object) as a descendant of another object ("ancestor" object), associating a descendant object with one or more parameters of the ancestor object from which that descendant object descends, and making effective as to that descendant object a change, during configuration, to a parameter of that ancestor object, configuring the process control system in accord with one or more of the objects. As per claim 46.

Conclusion

The claims were scanned some typographical errors are present. The claims were given the broadest reasonable interpretation in view of the Specification. One ordinary skill in the art at the time of invention would need to know object oriented technology. The principles of inheritance, polymorphism, instantiation, scope of attributes and methods, accessor functions (getters and setters) and and scope resolution operators. The product generates C++ code. The inherent features of C++ are also an underlying support for the rejection. Future amendments and arguments should keep this in mind.

Art Unit: 2124

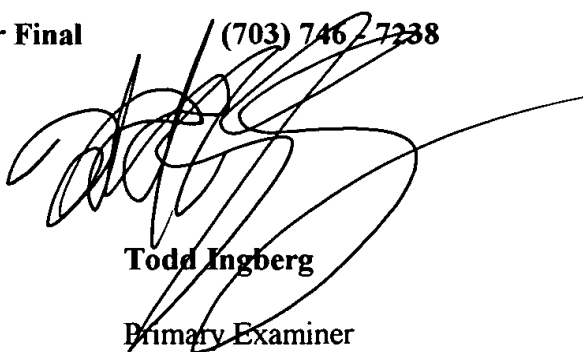
Correspondence Information

5. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to **Todd Ingberg** whose telephone number is **(703) 305-9775**. The Examiner is working a Maxi-Flex schedule and can be reached Monday through Friday. If attempts to reach the examiner by telephone are unsuccessful, the **Examiner's Supervisor, Kakali Chaki** be reached at **(703)305-9662**. Any response to this office action should be mailed to: **Director of Patents and Trademarks Washington, D.C. 20231**, or **Hand-delivered** responses should be brought to **Crystal Park II, 2121 Crystal Drive Arlington, Virginia, (Receptionist located on the fourth floor)**, or **faxed**. The following fax numbers apply:

Official (703) 746 - 7239

Non Official/ Draft (703) 746 -7240

After Final (703) 746 / 7238

A large, stylized handwritten signature in black ink, appearing to read 'Todd Ingberg', is written over the printed name and title.

Todd Ingberg

Primary Examiner

Art Unit 2124

June 30, 2003